

Amendments to the Specification

Please replace original paragraphs 4 and 5 with the following amended paragraphs:

[0004] According to one aspect of the invention, there is provided a surface cooled heat exchanger that includes a stack of elongate plate pairs, each plate pair including first and second plates having elongate central portions surrounded by sealably joined edge portions with a fluid passage defined between the central portions; each plate pair having spaced apart inlet and outlet openings that are connected together for the flow of fluid through the fluid passages; each. Each plate pair having has an exposed fin plate extending peripherally outward from the joined edge portions along a length of the plate pair. Each fin plate preferably has a varying profile along a length thereof. The plate pairs include two end plate pairs and intermediate plate pairs arranged between the end plate pairs. Each end plate pair abuts on one side thereof with a respective one of the intermediate plate pairs. The elongate central portion of the first plate of each intermediate plate pair abuts the elongate central portion of the second plate of an adjacent one of the plate pairs.

[0005] According to another aspect of the invention, there is provided a cooler for cooling snowmobile engine coolant. The cooler includes a stack of elongate plate pairs, each plate pair including first and second plates that are joined together to define an elongate sealed internal passage for the engine coolant having spaced apart inlet and outlet openings; each. The first and second plates have elongate central portions surrounded by sealably joined edge portions. The internal passage is formed between the central portions of each plate pair and extends substantially from a first end to a second end of the respective plate pair. The plate pairs include two end plate pairs and intermediate plate pairs arranged between the end plate pairs. Each end plate pair abuts on one side thereof with a respective one of the intermediate plate pairs. The elongate central portion of the first plate of each intermediate plate pair abuts the elongate central portion of the second plate of an adjacent one of the plate pairs substantially from the first end to the second end thereof. Each plate pair including includes an enlarged exposed fin plate portion located adjacent a substantial length of the internal passage for

receiving materials flung by a drive track of the snowmobile; ~~and mounting~~ Mounting bracket means are connected to the stack of plate pairs for securing the stack to the snowmobile.

Please cancel current paragraphs 23 and 24 entirely.

Please replace original paragraph 31 with the following amended paragraph:

[0031] Referring to Figures 1 and 2, in the illustrated embodiment, the heat exchanger 10 includes two end plate pairs 12, and a plurality of intermediate plate pairs 12, all of which are arranged parallel to each other. The end plate pairs each abut on one side thereof with a respective intermediate plate pair, and the intermediate pairs are each sandwiched on both sides of other plate pairs. For each of the intermediate plate pairs, the planar central portion 38 of the first plate 34 of one plate pair 12 abuts against the planar central portion 42 of the second plate 36 of an adjacent plate pair 12. Fin plate portions 46 are spaced apart from each other such that ice, snow, air, slush, water and other materials can be thrown up on and in between the fin plate portions 46 by snowmobile drive track 32. ~~In some embodiments, it may be desirable to have a heat exchanger in which the planar central portions of adjacent plate pairs are spaced apart from each other, to allow cooling materials or fluids to get between the different plate pairs. In such configurations, spacers 140 (see Figure 16) can be used between the plate pairs 12, or integrally formed outwardly extending bosses 142 (see Figure 17) can be provided in the plates 34, 36 around openings 50, 52 to provide a desired spacing 144 between adjacent plate pairs.~~

Please replace original paragraphs 33 and 34 with the following amended paragraphs:

[0033] In some embodiments, the plate pairs would be formed from identical or substantially identical plates. By way of example, Figures 7 and 8 show an embodiment of a plate pair 70 that could be used in heat exchanger 10 in place of plate pair 12. The plate pair 70 is formed from two substantially identical plates 72, 74. Each plate 72, 74 includes an elongate central planar portion 76 that is surrounded by a peripheral edge portion 78. The part of

peripheral edge portion 78 that is along an elongate side of the central planar portion 76 is enlarged to provide a lower fin plate 80. The plates 72, 74 are sealably joined about peripheral edge portions 78, with central planar portions 76 being spaced apart and defining flow passage 24 therebetween. The planar fin plates 80 of each of the plates 72, 74 have parallel abutting surfaces, and may have edge enhancements such as slots 56 provided along their respective lengths. Alternative edge enhancements such as those described above in respect of Figures 6A-6D could also be used.

[0034] Various flow augmentation devices that are known in the art of plate pair type heat exchanger could be used in the flow passages of the plate pairs of the present invention to improve heat transfer and strengthen the heat exchanger structure. By way of example, and an elongate turbulizer 82 (Figure 8) including rows of expanded convolutions could extend the length of flow passage 24. Alternatively, ribs such as those shown in U.S. Patent No. 5,692,559 issued December 2, 1997 could be provided along the walls that define the flow passage 24. Dimples along the flow passage 24 walls could also be used to augment flow.